

10/593958

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SEQUENCE LISTING

<110> BORGFORD, Thor
BRAUN, Curtis
PURAC, Admir
STOLL, Dominik

<120> GLYCOSYLATION VARIANTS OF RICIN-LIKE PROTEINS

<130> 10447-50

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<150> US 60/555,678

<151> 2004-03-24

<160> 6

<170> PatentIn version 3.3

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<212> PRT

<213> Artificial Sequence

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Leu Pro Asn Arg Val Gly Leu Pro Ile Asn Gln Arg Phe Ile Leu Val
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Glu Leu Ser Asn His Ala Glu Leu Ser Val Thr Leu Ala Leu Asp Val
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Thr Asn Ala Tyr Val Val Gly Tyr Arg Ala Gly Asn Ser Ala Tyr Phe
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Phe His Pro Asp Asn Gln Glu Asp Ala Glu Ala Ile Thr His Leu Phe
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Thr Asp Val Gln Asn Arg Tyr Thr Phe Ala Phe Gly Gly Asn Tyr Asp
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Arg Leu Glu Gln Leu Ala Gly Asn Leu Arg Glu Asn Ile Glu Leu Gly
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Asn Gly Pro Leu Glu Glu Ala Ile Ser Ala Leu Tyr Tyr Tyr Ser Thr
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Gly Gly Thr Gln Leu Pro Thr Leu Ala Arg Ser Phe Ile Ile Cys Ile
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Gln Met Ile Ser Glu Ala Ala Arg Phe Gln Tyr Ile Glu Gly Glu Met
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Arg Thr Arg Ile Arg Tyr Asn Arg Arg Ser Ala Pro Asp Pro Ser Val
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Ile Thr Leu Glu Asn Ser Trp Gly Arg Leu Ser Thr Ala Ile Gln Glu
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Ser Asn Gln Gly Ala Phe Ala Ser Pro Ile Gln Leu Gln Arg Arg Asn
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Gly Ser Lys Phe Ser Val Tyr Asp Val Ser Ile Leu Ile Pro Ile Ile
245 250 255

Ala Leu Met Val Tyr Arg Cys Ser Pro Gln Gly Ile Ala Gly Gln Cys
260 265 270

Met Asp Pro Glu Pro Ile Val Arg Ile Val Gly Arg Asn Gly Leu Cys
275 280 285

Val Asp Val Arg Asp Gly Arg Phe His Asn Gly Asn Ala Ile Gln Leu
290 295 300

Trp Pro Cys Lys Ser Asn Thr Asp Ala Asn Gln Leu Trp Thr Leu Lys
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Arg Asp Asn Thr Ile Arg Ser Asn Gly Lys Cys Leu Thr Thr Tyr Gly
325 330 335

Tyr Ser Pro Gly Val Tyr Val Met Ile Tyr Asp Cys Asn Thr Ala Ala
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Pro Arg Ser Ser Leu Val Leu Ala Ala Thr Ser Gly Asn Ser Gly Thr
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Thr Leu Thr Val Gln Thr Asn Ile Tyr Ala Val Ser Gln Gly Trp Leu
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Pro Thr Gln Asn Thr Gln Pro Phe Val Thr Thr Ile Val Gly Leu Tyr
405 410 415

Gly Leu Cys Leu Gln Ala Asn Ser Gly Gln Val Trp Ile Glu Asp Cys
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Ser Ser Glu Lys Ala Glu Gln Gln Trp Ala Leu Tyr Ala Asp Gly Ser
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Ile Arg Pro Gln Gln Asn Arg Asp Asn Cys Leu Thr Ser Asp Ser Asn
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Ile Arg Glu Thr Val Val Lys Ile Leu Ser Cys Gly Pro Ala Ser Ser
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Gly Gln Arg Trp Met Phe Lys Asn Asp Gly Thr Ile Leu Asn Leu Tyr
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Ser Gly Leu Val Leu Asp Val Arg Ala Ser Asp Pro Ser Leu Lys Gln
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Leu Pro Asn Arg Val Gly Leu Pro Ile Asn Gln Arg Phe Ile Leu Val
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Glu Leu Ser Asn His Ala Glu Leu Ser Val Thr Leu Ala Leu Asp Val
65 70 75 80

Thr Asn Ala Tyr Val Val Gly Tyr Arg Ala Gly Asn Ser Ala Tyr Phe
85 90 95

Phe His Pro Asp Asn Gln Glu Asp Ala Glu Ala Ile Thr His Leu Phe
100 105 110

Thr Asp Val Gln Asn Arg Tyr Thr Phe Ala Phe Gly Gly Asn Tyr Asp
115 120 125

Arg Leu Glu Gln Leu Ala Gly Asn Leu Arg Glu Asn Ile Glu Leu Gly
130 135 140

Asn Gly Pro Leu Glu Glu Ala Ile Ser Ala Leu Tyr Tyr Tyr Ser Thr
145 150 155 160

Gly Gly Thr Gln Leu Pro Thr Leu Ala Arg Ser Phe Ile Ile Cys Ile
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Gln Met Ile Ser Glu Ala Ala Arg Phe Gln Tyr Ile Glu Gly Glu Met
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Arg Thr Arg Ile Arg Tyr Asn Arg Arg Ser Ala Pro Asp Pro Ser Val
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Ile Thr Leu Glu Asn Ser Trp Gly Arg Leu Ser Thr Ala Ile Gln Glu
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Ser Asn Gln Gly Ala Phe Ala Ser Pro Ile Gln Leu Gln Arg Arg Asn
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Gly Ser Lys Phe Ser Val Tyr Asp Val Ser Ile Leu Ile Pro Ile Ile
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Ala Leu Met Val Tyr Arg Cys Ser Pro Gln Gly Ile Ala Gly Gln Cys
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Met Asp Pro Glu Pro Ile Val Arg Ile Val Gly Arg Asn Gly Leu Cys
275 280 285

Val Asp Val Arg Asp Gly Arg Phe His Asn Gly Asn Ala Ile Gln Leu
290 295 300

Trp Pro Cys Lys Ser Asn Thr Asp Ala Asn Gln Leu Trp Thr Leu Lys
305 310 315 320

Arg Asp Asn Thr Ile Arg Ser Asn Gly Lys Cys Leu Thr Thr Tyr Gly
325 330 335

Tyr Ser Pro Gly Val Tyr Val Met Ile Tyr Asp Cys Asn Thr Ala Ala
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Thr Asp Ala Thr Arg Trp Gln Ile Trp Asp Asn Gly Thr Ile Ile Asn
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Pro Arg Ser Ser Leu Val Leu Ala Ala Thr Ser Gly Asn Ser Gly Thr
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Thr Leu Thr Val Gln Thr Asn Ile Tyr Ala Val Ser Gln Gly Trp Leu
385 390 395 400

Pro Thr Asn Asn Thr Gln Pro Phe Val Thr Thr Ile Val Gly Leu Tyr
405 410 415

Gly Leu Cys Leu Gln Ala Asn Ser Gly Gln Val Trp Ile Glu Asp Cys
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Ser Ser Glu Lys Ala Glu Gln Gln Trp Ala Leu Tyr Ala Asp Gly Ser
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Ile Arg Glu Thr Val Val Lys Ile Leu Ser Cys Gly Pro Ala Ser Ser
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Gly Gln Arg Trp Met Phe Lys Asn Asp Gly Thr Ile Leu Asn Leu Tyr
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Ser Gly Leu Val Leu Asp Val Arg Ala Ser Asp Pro Ser Leu Lys Gln
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Leu Phe
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Arg Gly Arg Leu Thr Thr Gly Ala Asp Val Arg His Glu Ile Pro Val
35 40 45

Leu Pro Asn Arg Val Gly Leu Pro Ile Asn Gln Arg Phe Ile Leu Val
50 55 60

Glu Leu Ser Asn His Ala Glu Leu Ser Val Thr Leu Ala Leu Asp Val
65 70 75 80

Thr Asn Ala Tyr Val Val Gly Tyr Arg Ala Gly Asn Ser Ala Tyr Phe
85 90 95

Phe His Pro Asp Asn Gln Glu Asp Ala Glu Ala Ile Thr His Leu Phe
100 105 110

Thr Asp Val Gln Asn Arg Tyr Thr Phe Ala Phe Gly Gly Asn Tyr Asp
115 120 125

Arg Leu Glu Gln Leu Ala Gly Asn Leu Arg Glu Asn Ile Glu Leu Gly
130 135 140

Asn Gly Pro Leu Glu Glu Ala Ile Ser Ala Leu Tyr Tyr Tyr Ser Thr
145 150 155 160

Gly Gly Thr Gln Leu Pro Thr Leu Ala Arg Ser Phe Ile Ile Cys Ile
165 170 175

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Gln Met Ile Ser Glu Ala Ala Arg Phe Gln Tyr Ile Glu Gly Glu Met
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Arg Thr Arg Ile Arg Tyr Asn Arg Arg Ser Ala Pro Asp Pro Ser Val
195 200 205

Ile Thr Leu Glu Asn Ser Trp Gly Arg Leu Ser Thr Ala Ile Gln Glu
210 215 220

Ser Asn Gln Gly Ala Phe Ala Ser Pro Ile Gln Leu Gln Arg Arg Asn
225 230 235 240

Gly Ser Lys Phe Ser Val Tyr Asp Val Ser Ile Leu Ile Pro Ile Ile
245 250 255

Ala Leu Met Val Tyr Arg Cys Gly Ser Pro Gln Gly Ile Ala Gly Gln
260 265 270

Cys Met Asp Pro Glu Pro Ile Val Arg Ile Val Gly Arg Asn Gly Leu
275 280 285

Cys Val Asp Val Arg Asp Gly Arg Phe His Asn Gly Asn Ala Ile Gln
290 295 300

Leu Trp Pro Cys Lys Ser Asn Thr Asp Ala Asn Gln Leu Trp Thr Leu
305 310 315 320

Lys Arg Asp Asn Thr Ile Arg Ser Asn Gly Lys Cys Leu Thr Thr Tyr
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Gly Tyr Ser Pro Gly Val Tyr Val Met Ile Tyr Asp Cys Asn Thr Ala
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Ala Thr Asp Ala Thr Arg Trp Gln Ile Trp Asp Asn Gly Thr Ile Ile
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Asn Pro Arg Ser Ser Leu Val Leu Ala Ala Thr Ser Gly Asn Ser Gly
370 375 380

Thr Thr Leu Thr Val Gln Thr Asn Ile Tyr Ala Val Ser Gln Gly Trp
385 390 395 400

Leu Pro Thr Gln Asn Thr Gln Pro Phe Val Thr Thr Ile Val Gly Leu
405 410 415

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Tyr Gly Leu Cys Leu Gln Ala Asn Ser Gly Gln Val Trp Ile Glu Asp
420 425 430

Cys Ser Ser Glu Lys Ala Glu Gln Gln Trp Ala Leu Tyr Ala Asp Gly
435 440 445

Ser Ile Arg Pro Gln Gln Asn Arg Asp Asn Cys Leu Thr Ser Asp Ser
450 455 460

Asn Ile Arg Glu Thr Val Val Lys Ile Leu Ser Cys Gly Pro Ala Ser
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Ser Gly Gln Arg Trp Met Phe Lys Asn Asp Gly Thr Ile Leu Asn Leu
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Tyr Ser Gly Leu Val Leu Asp Val Arg Ala Ser Asp Pro Ser Leu Lys
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